

## WHAT IS CLAIMED IS:

1. A method for adapting the lateral and temporal resolution of a microscope image, characterized by the following steps:
  - 5 a) detecting changes in the currently transmitted image window by way of changes in the settings of the microscope (2);
  - b) switching over to a transmission mode for video conferencing;
  - c) recording the time that has elapsed since the last change in the settings of the microscope (2); and
  - 10 d) switching over to the transmission mode for still images when a certain time limit is exceeded.
2. The method as defined in Claim 1, characterized in that detection of the changes in the current image window is accomplished by means of an image analysis based on  
15 the comparison of two microscope images taken successively in time.
3. The method as defined in Claim 1, characterized in that detection of the changes in the current image window is accomplished by means of an automatic comparison of the position of the image window of two microscope images taken successively in  
20 time.
4. The method as defined in Claim 1, characterized in that in the context of an automatic microscope, the signals necessary for adjustment of the microscope parameters are detected, and on the basis of the signals a determination is made as  
25 to whether to switch over to another transmission mode.

5. The method as defined in Claim 1, characterized in that in the context of an automatic microscope with manual adjustment capabilities, the changes in the image window are recorded as a function of time, and on the basis of the changes as a function of time a determination is made as to whether to switch over to another transmission mode.
6. An arrangement for adapting the lateral and temporal resolution of a microscope image, characterized in that
- means for detecting the changes in the image content of a microscopic image;
  - electronic means for limiting the image content on the basis of the data supplied by the means for detecting the change in the image content; and
  - means for automatically switching over to the transmission mode suitable for the detected changes in the image content
- are provided.
7. The arrangement as defined in Claim 7, characterized in that the means for detecting the change comprises an image data processing means (22) that ascertains salient image points and their positions within a defined image window.
8. The arrangement as defined in Claim 7, characterized in that the means for detecting the change is a position data processing means (32), the position data processing means (32) comprising multiple inputs (32<sub>1</sub>, 32<sub>2</sub>, 32<sub>n</sub>) which supply signals regarding the position of an X-Y stage (12) and the magnification and focus of the microscope (2).

9. The arrangement as defined in Claim 7, characterized in that a timer (21, 31) connected to a comparison element (26, 36) is provided, the comparison element (26, 36) continuing to supply a still image at a first output (25<sub>1</sub>, 35<sub>1</sub>) on the basis of a specific time interval of the timer (21, 31) and the result of the comparison.

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10. The arrangement as defined in Claim 8, characterized in that a timer (21, 31) connected to a comparison element (26, 36) is provided, the comparison element (26, 36) continuing to supply a still image at a first output (25<sub>1</sub>, 35<sub>1</sub>) on the basis of a specific time interval of the timer (21, 31) and the result of the comparison.

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11. The arrangement as defined in Claim 8, characterized in that a timer (21, 31) connected to a comparison element (26, 36) is provided, the comparison element (26, 36) continuing to supply a still image at a first output (25<sub>1</sub>, 35<sub>1</sub>) on the basis of a specific time interval of the timer (21, 31) and the result of the comparison.

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12. The arrangement as defined in Claim 7, characterized in that the comparison element (26, 36) is connected to a switchover means (23, 33) and that, in the event of a deviation in the comparison element (26, 36), the switchover means (23, 33) thereupon reduces the image data of a current input image in accordance with the bandwidth and the transmission rate in order to generate a live image for video conferencing.

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